

OPTIMIZING PLANTING CONFIGURATION FOR LOCAL MAIZE VARIETIES OF THE HILLY AREAS OF BANGLADESH

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Executive Summary

The study was made at the Dighinala Upazilla of Khagrachori district during the *Rabi* season of 2022-23 to evaluate the performance of different pre-selected improved local maize varieties under varying planting configurations. Treatments comprised three planting configurations such as S50 (row to row distance 50 cm), S60 (row to row distance 60 cm) and S70 (row to row distance 70 cm) and eight varieties, namely V1 (YellowWhiteGrey), V2 (BlackRed), V3 (Black), V4 (PurplePink), V5 (CopperRed), V6 (GreyWhite), V7 (White) and V8 (Red). Results showed that varieties, planting configuration and also their interactions had significant effect on plant height, number of leaves per plant, leaf area, dry weight, cob number weight per plant, grain weight and harvest index. The variety treatment V6 showed significantly the highest grain yield per hectare (5.565 t) which however, was not significantly higher than those of V2, V4, V5 and V7. The planting configuration S70 had the maximum grain yield per hectare (5.217 t) which was statistically at par with that of S60 (5.017 t). The variety treatment V1 produced the lowest grain yield (4.607 t). The interaction treatment V6S70 had the highest grain yield per hectare (5.713 t) which was not significantly higher than those of V5S70 and V6S60. The highest grain yield of V6S70 interaction was attributed to the highest grain yield per plant (95.87 g) and significantly higher harvest index of this treatment. However, the variety Gray White (V6) grown at row distance of 70 cm may not perform in other areas of the hill districts. So, the trial needs to be repeated in other areas of the hill districts.

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